

**Environmental  
Protection Agency**

John R. Kasich, Governor  
Mary Taylor, Lt. Governor  
Scott J. Nally, Director

November 30, 2011

**RE: CENTRAL WASTE  
GROUND WATER  
NOTICE OF VIOLATION  
REQUEST FOR INFORMATION**

**CERTIFIED MAIL 7011 0470 0002 3496 0378**

Donald Minihan  
Central Waste, Inc.  
12003 Oyster Road  
Alliance, OH 44601

Dear Mr. Minihan:

The Ohio Environmental Protection Agency (Ohio EPA) has reviewed the following documents:

- Ground Water Quality Assessment Plan – Revision 3
- Ground Water Quality Assessment Plan – Revision 5
- Ground Water Quality Assessment Plan Monitoring Plan – Revision 6
- Response to Ohio EPA Comments dated September 15, 2010

**BACKGROUND**

On December 16, 2009, Ohio EPA received a document entitled, "Ground Water Quality Assessment Plan - Revision 3 for Central Waste Landfill," dated December 15, 2009.

Revision 3 of the Ground Water Quality Assessment Plan (GWQAP) was submitted to address the inclusion of well MW-30S in the assessment program and the removal of MW-5SR, MW-8D, MW-14D, MW-15D, and MW-20SR from the assessment program.

Revision 3 includes:

- An entire revised text
- Figure 3 – Potentiometric Surface Map of the Middle Mercer Shale
- Figure 4 – Potentiometric Surface map of the Glacial Till/Mine Spoil Deposits
- Figure 5 – Ground Water Monitoring Network
- Figure 10 – Water-Level Measurement Form
- Table 1 Monitoring Well Construction Summary – Central Waste Landfill
- Table 5 Monitoring Schedule – Central Waste

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- Additional well logs (replacement wells) for Appendix A

On December 29, 2010, Ohio EPA received a document entitled, "Ground Water Quality Assessment Plan - Revision 5 for Central Waste Landfill," dated December 27, 2010.

Revision 5 was submitted to address changes in the Assessment Plan Schedule for the date of submittal of the Ground Water Quality Assessment Report and changes to information presented in one figure and two tables.

Revision 5 includes:

- Pages iv – Revisions to Ground Water Detection Monitoring Plan Central Waste Landfill
- Page 7-1 Assessment Plan Schedule
- Figure 10 – Water-Level Measurement Form Central Waste Landfill
- Table 1 – Monitoring Well Construction Summary – Central Waste Landfill
- Table 5 – Monitoring Schedule – Central Waste Landfill

On August 8, 2011, Ohio EPA received a document entitled, "Ground Water Quality Assessment Plan - Revision 6 for Central Waste Landfill," dated December 27, 2010.

Revision 6 of the Ground Water Quality Assessment Plan (GWQAP) was submitted to address the change in classification of several of the monitoring wells to piezometers. In agreement with Mr. Mark Kroenke of Ohio EPA, NEDO, on June 1, 2011, upgradient glacial wells MW-24S and MW-26S will be reclassified as piezometers; because, there are two other upgradient glacial wells. Upgradient mine spoil well MW-15S will be reclassified as a piezometer since there are two other mine spoil wells. Well MW-24S was previously characterized as a mine spoil well but after further evaluation of the boring log and physical location it was determined to be a glacial well. As discussed via email with Mr. Kroenke on August 2, 2011, Middle Mercer Shale UAS well MW-1DR is now considered upgradient, and not downgradient as previously interpreted, and MW-1DR will be maintained as a piezometer.

Revision 6 includes:

- Pages iv – Revisions to Ground Water Detection Monitoring Plan Central Waste Landfill
- Page 5-16 Site Manager Contact Information
- Figure 5 – Ground Water Monitoring Network
- Figure 10 – Water-Level Measurement Form Central Waste Landfill
- Table 1 – Monitoring Well Construction Summary – Central Waste Landfill
- Table 5 – Monitoring Schedule – Central Waste Landfill

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On June 2, 2011, Ohio EPA received a document entitled, "Response to Ohio EPA Comments Dated September 15, 2010, Central Waste Landfill, Inc." dated May 31, 2011.

The May 31, 2011 Response to Ohio EPA Comments was submitted to respond to Ohio EPA Comments, dated November 24, 2009, regarding the GWQAP-Revision 2, dated May 10, 2010; GWQAP-Revision 4. Ohio EPA's comments, dated September 15, 2010, indicated that data presented on the Potentiometric Surface Map of the Glacial Till/Mine Spoil Deposits, 12/15/2009, dated February 25, 2010, shows that surface water in Boot Lake has an elevation of 1054.95 feet amsl implying that Boot Lake is recharging the mine spoil ground water in the eastern portion of the landfill. This interpretation of ground water flow in the mine spoil/glacial till significant zone of saturation is contrary to the historically accepted interpretation that ground water flow in the mine spoil/glacial till is predominately toward and discharges to Boot Lake. According to the May 31, 2011 Response to Comments, the flow pattern in the mine spoil was altered by dewatering activities conducted May 30, 2009 through November 2, 2009 at the North Impoundment. The response included hydrographs of Mine Soil Significant Zone of Saturation (SZS) and Mine Spoil Upper Aquifer System (UAS) from July 14, 2006 through July 13, 2011 that show water levels prior to the dewatering event, during the dewatering event, and through most of recovery. A cursory review of the Potentiometric Surface Map of the Glacial Till/Mine Spoil Deposits, 05/23/2011 (Figure 2) in the August 5, 2011 "Statistical Analysis of Ground Water Monitoring Results, 2011 First Semiannual Event" (to be reviewed) appears to suggest that that the Mine Spoil Aquifer is still recovering and that there is a small ground water mound between the eastern permitted limit of waste of the sludge landfill and the western shore of Boot Lake.

Central Waste Landfill has provided the revised text, figures, and tables of the GWQAP – Revision 3, Revision 5, and Revision 6 and requested that the appropriate pages of the GWQAP be removed and replaced in the GWQAP. Revision 3 versions of the entire text and Appendix A, Revision 5 version of page 7-1, and Versions 6 of pages iv and page 5-16, Figures 5 and 10; Tables 1 and 5 supersede the earlier versions of those referenced items. DDAGW, NEDO had replaced the respective Revision 3, 5, or 6 versions of those items prior to this review.

Ohio EPA has identified the following violations:

1. **The facility owner or operator of Central Waste Landfill is in violation of OAC Rule 3745-27-10(E)(4)(e) requiring that a ground water quality assessment plan include a description of data evaluation procedures for the GWQAP.**

Section 6.0 Assessment Data Evaluation Procedures of the GWQAP does not specify how comparisons of concentrations of waste derived constituents in the assessment wells will be made to concentrations of those constituents in background wells (e.g., mean or historically high concentration, etc.)

#2941

To return to compliance, the facility owner or operator must specify the method by which constituent concentrations in assessment wells will be compared to constituent concentrations in background wells.

Ohio EPA required additional information in order to make a compliance determination regarding the following:

**2. Compliance with OAC Rule 3745-27-10(E)(5)(a)(ii) cannot be determined at this time.**

Section 6.0 Assessment Data Evaluation Procedures of the GWQAP does not specify that the timeframe for historical data to represent background constituent concentrations will ensure that the sample collection methods for the historic samples that the historic data represent is consistent with current sample collection methods.

The owner/operator must demonstrate that historic background data utilized for comparisons to assessment wells will represent samples that were collected in a manner consistent with the current sample collection method.

**3. Compliance with OAC Rules 3745-27-10(E)(1) and 3745-27-10(E)(6)(a) cannot be determined at this time.**

Section 4.1 Proposed Assessment Investigation of the GWQAP states that: "Vertical concentration, rate and extent at MW-28S, MW-30S, and MW-11SR will be evaluated with MW-30D. Vertical Concentration, rate, and extent at MW-12S will be evaluated with MW-16D." The proposed location of MW-30D is about 100 feet south of MW-28S and is shown on Figure 5. Data appears to suggest that there is a downward vertical component of ground water flow in the eastern portion of the Mine Spoil UAS, and that there may be a nexus between the Mine Spoil UAS and the upper bedrock saturated zone. According to a note on Figure 4 and information on well logs, MW-28S is screened in a deeper portion of the Mine spoil aquifer and appears to have an anomalously low potentiometric surface compared to other mine spoil wells in its vicinity. Comparing the Potentiometric Surface Map of the Middle Mercer Shale (Figure 3) and the Potentiometric Surface Map of the Glacial Till/Mine Spoil Deposits (Figure 4), there appears to be as little as two feet or less of separation between the potentiometric surfaces of Middle Mercer Shale UAS and the Mine Spoil UAS between the eastern portion of the sludge landfill and the western shore of Boot Lake.

It is DDAGW's opinion that the proposed location of MW-30D should be changed and that an additional monitoring well needs to be installed to determine vertical concentration, rate, and extent at MW-28S, MW-30SR, and MW-11R. The location of MW-30D needs to be moved as close as practicable to MW-28S, and an

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additional well needs to be installed as close as practicable to MW-11SR, and both wells need to be fully screened in the first water encountered in bedrock or the Middle Mercer UAS, whichever occurs first.

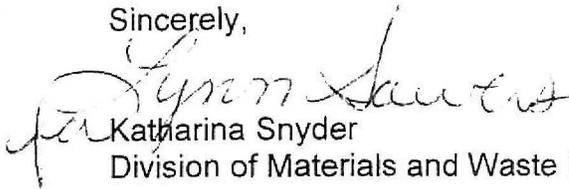
Ohio EPA has the following recommendation # 2604, # 3323, # 3324

4. Ohio EPA agrees that hydrograph Information in the May 31, 2011 "Response to Ohio EPA Comments, dated September 15, 2010," indicates that the Mine Soil UAS is recovering from the dewatering activities conducted between May 30, 2009 through November 2, 2009. A cursory review of the of the Potentiometric Surface Map of the Glacial Till/Mine Spoil Deposits, 05/23/2011 (Figure 2) in the August 5, 2011 "Statistical Analysis of Ground Water Monitoring Results, 2011 First Semiannual Event" (to be reviewed) appears to suggest that that the Mine Spoil Aquifer is still recovering, and that there is a small ground water mound between the eastern permitted limit of waste of the sludge landfill and the western shore of Boot Lake. In the future when presenting hydrograph information, it would be helpful to plot the level of Boot Lake (SW-2) with the other data.

Nothing in this letter shall be construed to authorize any waiver from the requirements of any applicable state or federal laws or regulations. This letter shall not be interpreted to release the Entity from responsibility under Chapters 3704, 3714, 3734, or 6111 of the Ohio Revised Code or under the Federal Clean Water or Comprehensive Environmental Response, Compensation, and Liability Acts for remedying conditions resulting from any release of contaminants to the environment.

If you have any questions concerning this letter, please contact me at (330) 963-1257.

Sincerely,



Katharina Snyder  
Division of Materials and Waste Management

KS:cl

cc: Al Muller, DDAGW-NEDO  
Mary Helen Smith, Mahoning County Health Department  
File: [Sowers/LAND/CENTRAL/GRO/50]  
DMWM # 2941, 3646, 4055, 2604, 3323, 3324